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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,257	01/05/2007	Marie-Therese Perrot-Simonetta	295085US0PCT	7546
22850	7590	10/31/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER COHEN, STEFANIE J	
			ART UNIT	PAPER NUMBER
			1793	
			NOTIFICATION DATE	DELIVERY MODE
			10/31/2008	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/593,257	<b>Applicant(s)</b> PERROT-SIMONETTA ET AL.	
	<b>Examiner</b> STEFANIE COHEN	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/20/2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/11/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The providing step in claim 7 claims hot-rolled into a bar OR wire but then claims further state “subjecting the wire” and “cooling the bar.” From the specification it appears that the billet is either rolled into a bar or wire. If the billet is a wire, the wire is subjected to cooling. But if the billet is a bar, the bar is cooled in the rolling heat, not performing both, as claimed in Claim 7.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 4-6 are rejected under 35 U.S.C. 102(b) as being unpatentable by Nishioka et al (4851052).

Nishioka teaches a steel melt consisting of 0.001-0.300 wt % C, not more than 0.8 wt % Si, 0.4-2.0 wt % Mn, not more than 0.007 wt % Al, 0.0010-0.0100 wt % O and the remainder of iron. In addition, it may as required contain one or more of the following in the amounts indicated: not more than 1% of Cr, not more than 1% of Mo, not more than 0.5% of V, not more than 0.05% of Ti, not more than 0.0025% of B, and not more than 0.008% Ca. Nishioka further teaches the melt having a fine grained acicular ferrite texture.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Nishioka et al (4851052).

The admitted prior art teaches the manufacturing process of medium or small size mechanical parts of medium carbon micro alloyed steel usually can

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comprise an operation of cold (press or forge) or hot (forge) plastic deformation, the choice of the hot or cold method often being made according to the final size of the parts. In all cases, this operation will be performed on pieces of steel cut up into bars deriving from long, continuously cast hot-rolled siderurgical semiproducts. When the plastic deformation is performed "hot," the pieces of steel are reheated beforehand to a temperature of approximately 1000 to 1200.degree. C., then hot-formed in the forge. The parts obtained then are cooled and treated thermally by hardening and tempering.

Although the admitted prior art teaches a process for manufacturing mechanical part, the admitted prior art does not disclose a specific composition of the steel or a metallographic structure containing acicular ferrite.

Nishioka teaches a steel melt consisting of 0.001-0.300 wt % C, not more than 0.8 wt % Si, 0.4-2.0 wt % Mn, not more than 0.007 wt % Al, 0.0010-0.0100 wt % O and the remainder of iron. In addition, it may as required contain one or more of the following in the amounts indicated: not more than 1% of Cr, not more than 1% of Mo, not more than 0.5% of V, not more than 0.05% of Ti, not more than 0.0025% of B, and not more than 0.008% Ca. Nishioka further teaches the melt having a fine grained acicular ferrite texture.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use the Nishioka composition with the admitted prior art method because Nishioka teaches this composition provides steel with strength and toughness equal to or better than that produced by convention methods.

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Regarding claim 1, the phrase “to obtain metallographic structure containing essentially acicular ferrite at least in the zones of mechanical stressing in tenacity and fatigue” is an inherent characteristic of the alloy and therefore does not further limit the claim.

Regarding claim 4, the phrase “the metallographic microstructure that the steel will have, once the part is implemented, is essentially composed of acicular ferrite at least in the zones of the part subjected to mechanical stressing in tenacity and fatigue” is an inherent characteristic of the alloy and therefore does not further limit the claim.

Regarding claim 7, the phrase “formation into rings to obtain a metallographic structure composed essentially of acicular ferrite” is an inherent characteristic of the alloy and therefore does not further limit the claim.

Regarding claims 8 and 9, it would have been obvious to one of ordinary skill in the art at the time of the invention to optimize the cooling conditions of the alloy to ensure the correct structural formation of the final product.

Regarding claim 10, the phrase “the metallographic microstructure that it will have after transformation will be essentially composed of acicular ferrite at least in the zones of the part subjected to mechanical stressing in tenacity and

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fatigue” is an inherent characteristic of the alloy and therefore does not further limit the claim.

Regarding claims 1-10, although the prior art in view of Nishioka does not teach the exact ranges as claimed, one of ordinary skill in the art at the time the invention was made would have considered the invention to be obvious because the compositional proportions taught by the references overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

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### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEFANIE COHEN whose telephone number is (571)270-5836. The examiner can normally be reached on Monday through Thursday 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 5712721234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stefanie Cohen

10/20/2008

SC

/Melvin Curtis Mayes/  
Supervisory Patent Examiner, Art Unit 1793